# IT Project Management

(Lecture 4)

Dr. Mohamad Al-Dabbagh

# Previous Lecture

- Fundamentals of Project Management
- Five Process Group

# Outline

- Traditional Project Management
- 9 Knowledge areas
  - Integration
  - Scope
  - Time

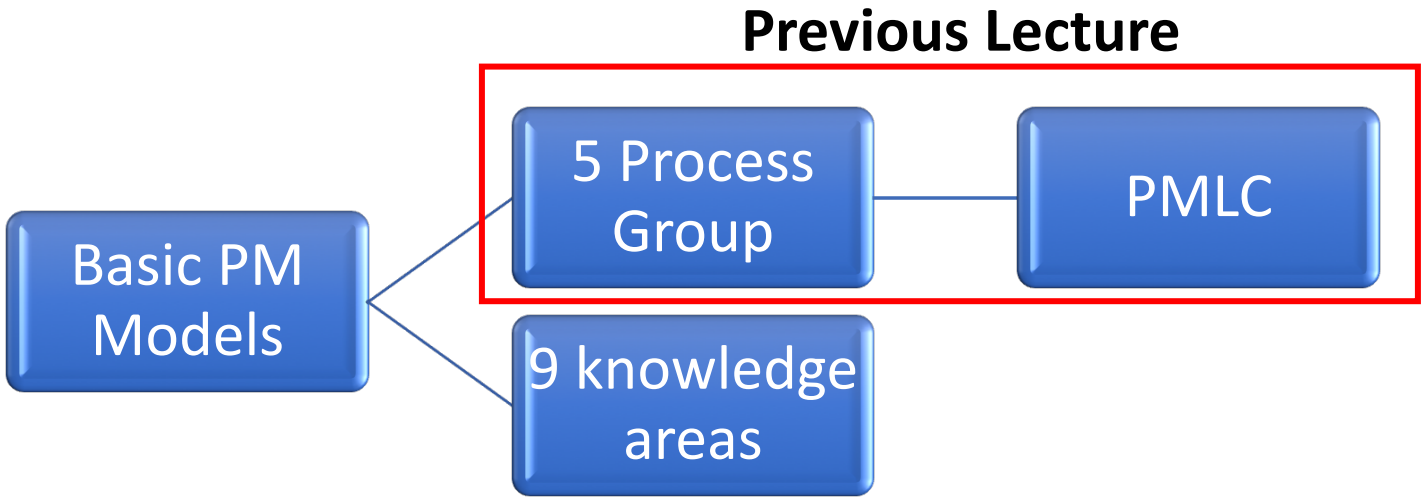
# From Previous Lecture

- PM seeks answers of six questions which are:

1. What business situation is being addressed?
   - (A problem, an untapped opportunity)
2. What do you need to do?
   - A solution ( known, partially known, unknown).
3. What will you do?
   - Project Overview Statement, general needs of client
4. How will you do?
   - Detail approach to the project, Plan of Project,
5. How will you know you did it?
   - Increase Revenue (incomes) , Avoid Costs , Improved Services
6. How well did you do ?
   - Quality of product (project),

# Basic PM Models

- Basic of all Project Management (PM) models are:




- **5 PG:** Scoping (or initiating), Planning, Launching (or Executing), Monitoring and Controlling, Closing
- **9 Knowledge Areas:** Integration management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communication Management, Risk management, Procurement Management.

# Basic PM Models

| Knowledge Areas | Scoping PG | Planning PG | Launching PG | Monitoring & Control PG | Closing PG |
|---|---|---|---|---|---|
| Integration | √ | √ | √ | √ | √ |
| Scope | | √ | | √ | |
| Time | | √ | | √ | |
| Cost | | √ | | √ | |
| Quality | | √ | √ | √ | |
| HR | | √ | √ | √ | |
| Communications | | √ | √ | √ | |
| Risk | | √ | | √ | |
| Procurement | | √ | √ | √ | √ |

Mapping of the nine knowledge areas to the five process groups

# Traditional PM

- Traditional Project Management (TPM) is a set of tools, templates, and processes for managing projects whose **goal and solution are both clearly understood**.

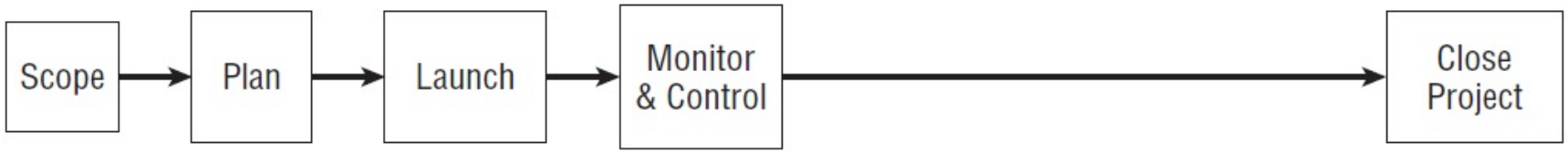
- There are Two categories of TPM models:

1. Linear Project Management Life Cycle Model (**Linear PMLC**)

2. Incremental Project Management Life Cycle Model (**Incremental PMLC**)

# Traditional PM

## 1. Linear PMLC:




Linear PMLC model

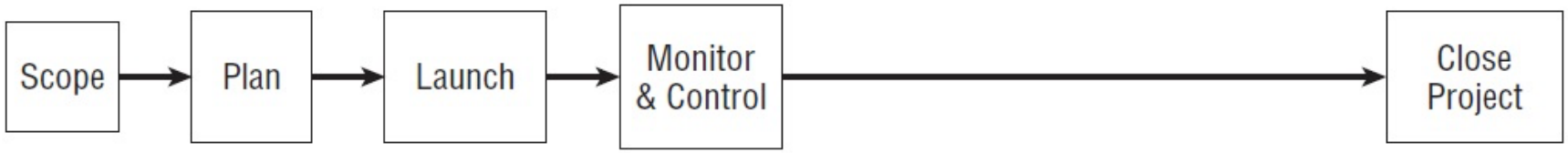
– **Definition:**

A Linear PMLC model consists of a number of dependent phases that are executed in a sequential order with no feedback loops. The complete solution is not released.

– Linear PMLC clarify the process of the project life cycle, which assumes that **all the project goals and solutions are clear**.

# Traditional PM

## 1. Linear PMLC:




Linear PMLC model

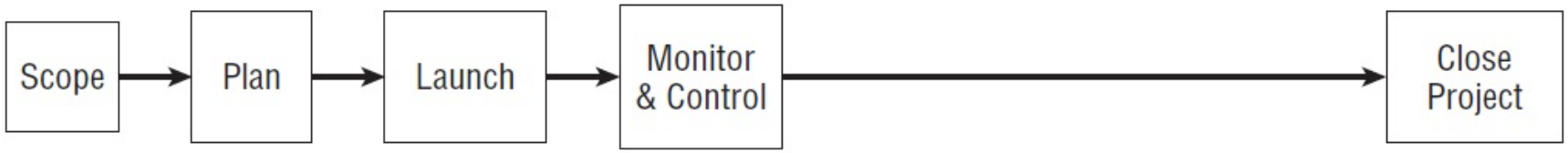
– **Risks of Linear PMLC:**

I. There is no loop back to revisit the process group or improve the deliverables based on project actual status and learning from other processes.

II. There is no room for the change order request from the client, because during the launch process group if any scope change request is issued it will most probably delay the project schedule.

# Traditional PM

## 1. Linear PMLC:



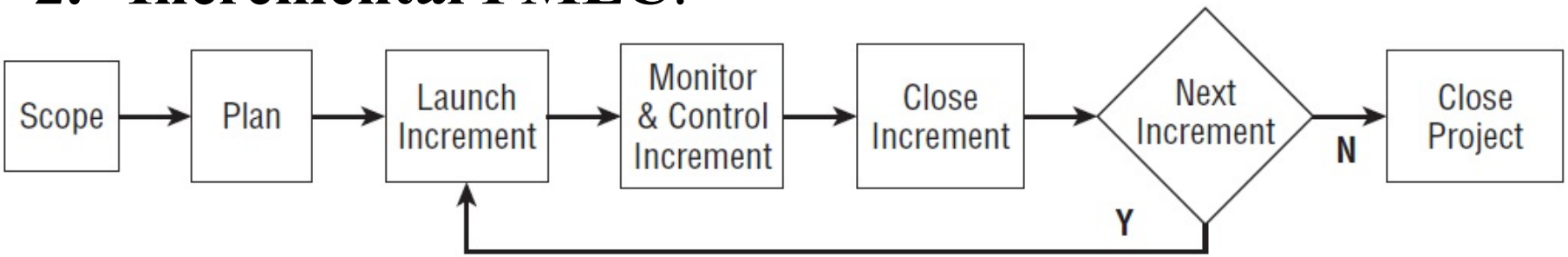

Linear PMLC model

– **Risks reduction:**

- The client should be aware that if any changes to the project original scope occurs, it would affect the schedule completion date.

# Traditional PM

## 2. Incremental PMLC:




Incremental PMLC model

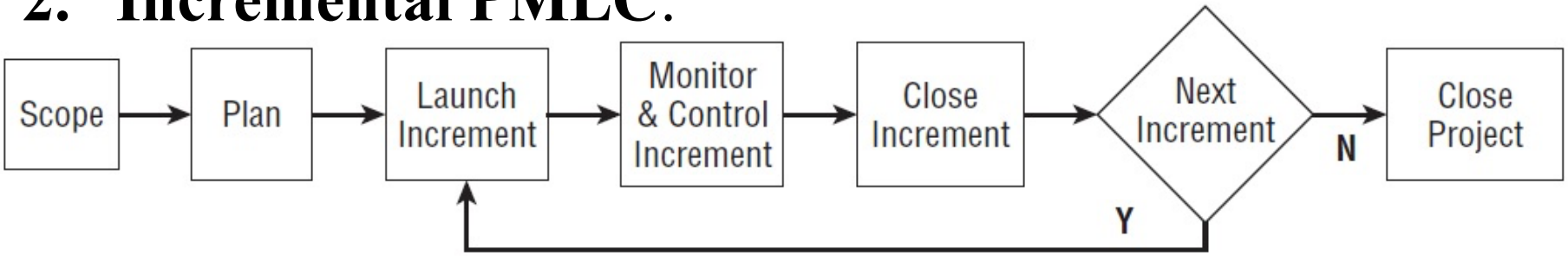
- **Definition:**

  An Incremental PMLC model consists of a number of dependent phases repeated in sequential order with no feedback loops

- Incremental PMLC clarify the process of the project life cycle, which assumes that all the project goals and solutions are clear. However, it allow for loop back to earlier process to manage change orders

# Traditional PM

## 2. Incremental PMLC:




Incremental PMLC model

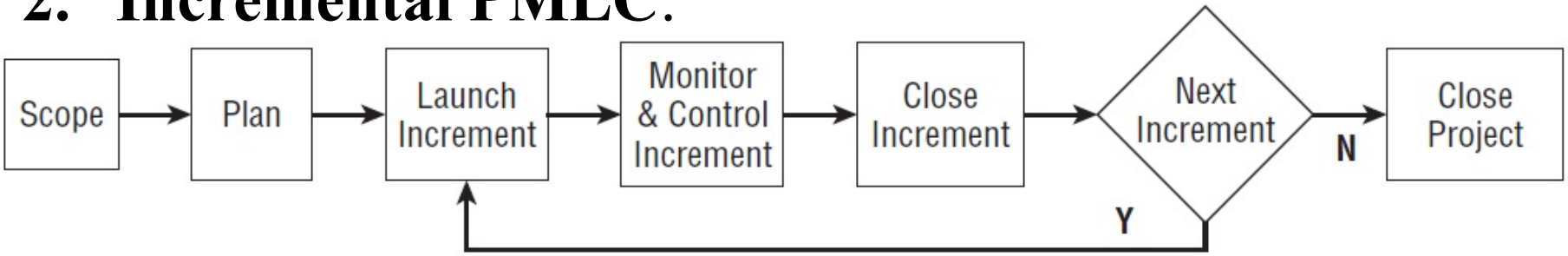
– **Risks of Incremental PMLC:**

I. Although, this PMLC allow for room of scope change, but this room only <u>available between increments</u>, not within the single one

II. Because the project deliverable partially released to the client, changes are highly expected from the end user

# Traditional PM

## 2. Incremental PMLC:



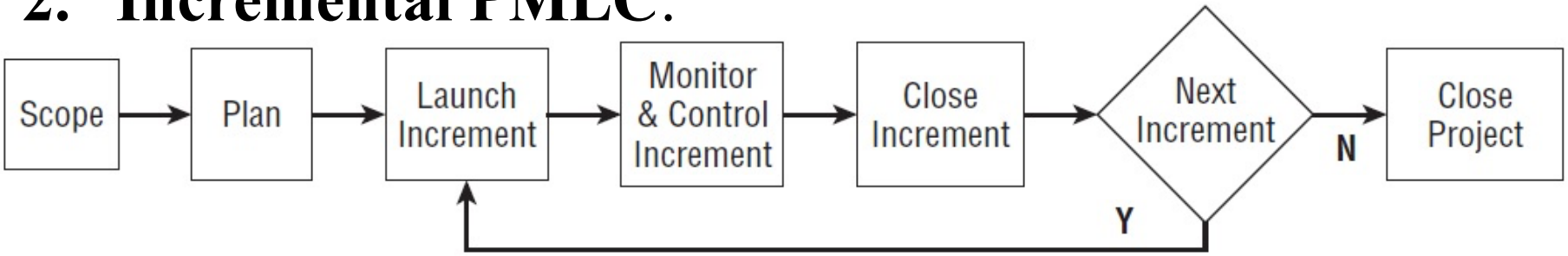

Incremental PMLC model

– **Risks of Incremental PMLC:**

III. More client involvement in this PMLC could affect the project progress if the client response timing is slow.

# Traditional PM

## 2. Incremental PMLC:




Incremental PMLC model

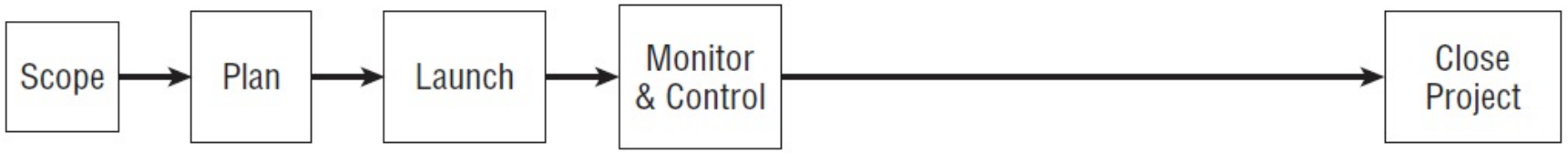
– **Risks reduction:**

- The increments should not be too short to avoid more changes, and should not be too long to affect the success in the market, and the project team Intact.

# Basic PM Models

- PMLC is a sequence of processes that includes scoping, planning, launching, monitoring, controlling and closing the projects to which it applies.

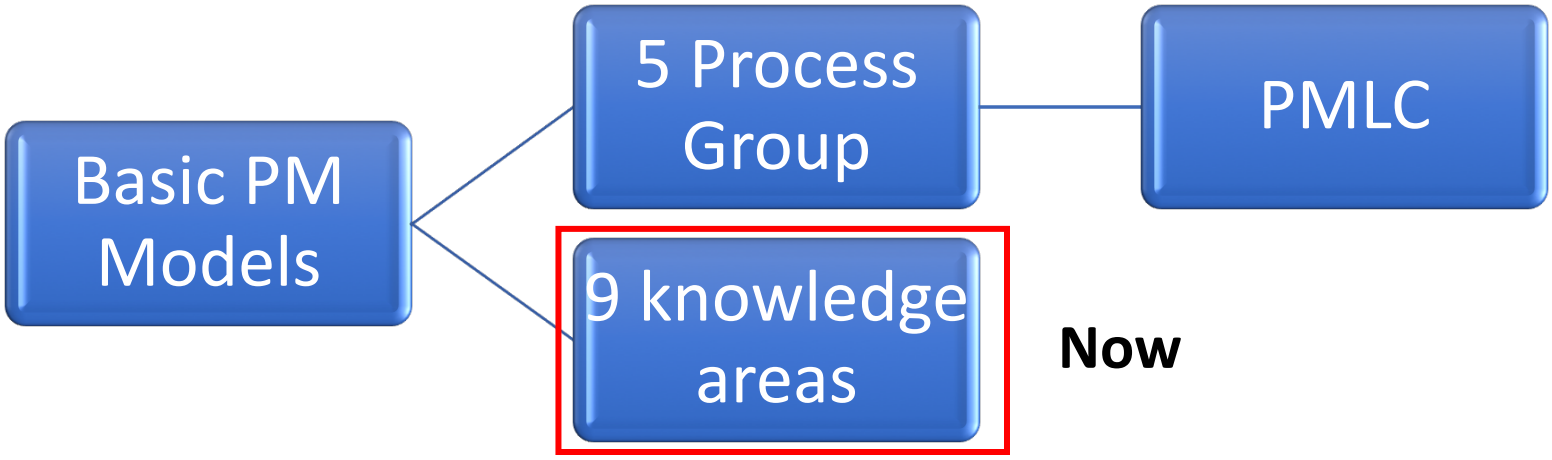
- A valid PMLC always start with a single scoping process and ends with a single closing process.
- Process groups are the building blocks of project management




Linear PMLC model

# Basic PM Models

- Basic of all Project Management (PM) models are:



# 9 Knowledge areas

- Project managers must coordinate all of the other knowledge areas throughout a project's life cycle

| Knowledge Areas | Scoping PG | Planning PG | Launching PG | Monitoring & Control PG | Closing PG |
|---|---|---|---|---|---|
| Integration | √ | √ | √ | √ | √ |
| Scope | | √ | | √ | |
| Time | | √ | | √ | |
| Cost | | √ | | √ | |
| Quality | | √ | √ | √ | |
| HR | | √ | √ | √ | |
| Communications | | √ | √ | √ | |
| Risk | | √ | | √ | |
| Procurement | | √ | √ | √ | √ |

Mapping of the nine knowledge areas to the five process groups

- Many new project managers have trouble looking at the "big picture" and want to focus on too many details

# 9 Knowledge areas

## 1. Integration management knowledge area (1/9)

- This knowledge area addresses the glue that links all of the deliverables from the PG into a unified whole.

- Comprises processes and activities required to ensure that various processes of the project are properly coordinated.

# 9 Knowledge areas

## 1. Integration management knowledge area (1/9)

– Includes following processes:


i. Develop Project Charter
   - create the document that formally authorizes a project, Start Point

ii. Develop Project Management Plan
   - coordinating all planning efforts to create a consistent, coherent document

iii. Direct & Manage Project Work
   - carrying out the project management plan by performing the activities included in it,

# 9 Knowledge areas

## 1. Integration management knowledge area (1/9)

– Includes following processes:

iv. Monitor & Control Project Work

- overseeing project work to meet the performance objectives of the project

v. Perform Integrated Change Control

- coordinating changes that affect the project's deliverables and organizational process assets

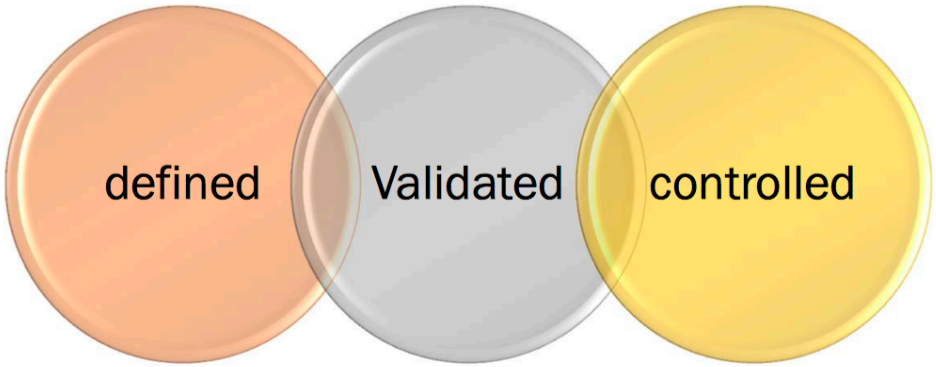

vi. Close Project or Phase

- finalizing all project activities to formally close the project

# 9 Knowledge areas

## 2. Scope management knowledge area (2/9)


- Scope management knowledge area is the identification and documentation of client requirements.
- Creating a scope management plan that documents how the project scope will be:

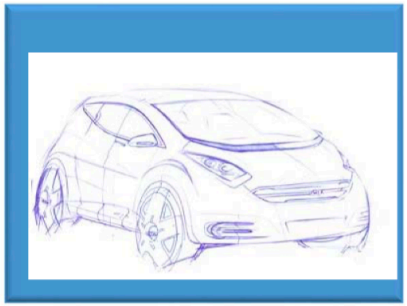



- provides guidance and direction on how scope will be managed throughout the project

# 9 Knowledge areas

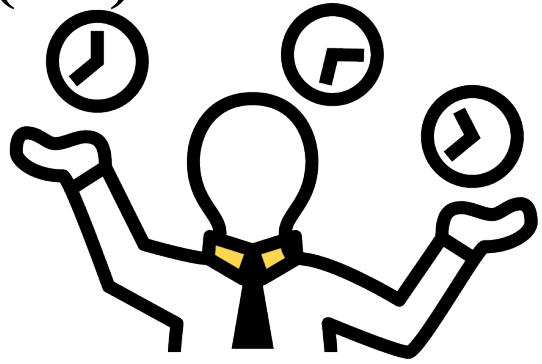
## 2. Scope management knowledge area (2/9)

- For gathering and documenting the requirements you should:
  - choice best-fit PMLC and
  - develop Work Breakdown Structure (WBS) that defines the work to be done to deliver those requirements.
- That prepares the team and the client with the information they need to estimate time, cost and resources requirements.



# 9 Knowledge areas

## 3. Time management knowledge area (3/9)



- Time management includes both a planning component and a control component.
- The planning component provides time estimates for both the duration of a project task and the actual effort or labor time required to complete the task
- The control component is part of the monitoring and controlling PG and involves
  - comparing estimated times to actual times as well as managing the schedule and cost variances.

# 9 Knowledge areas

## 4. Cost management knowledge area (4/9)

- The purpose of this knowledge area is so that the project can be completed within the approved budget.

- There are four project management processes in the Cost Management Knowledge Area.
  - Three of these are in the Planning Process Group and
  - One is the Monitoring & Controlling Process Group.

# 9 Knowledge areas

## 4. Cost management knowledge area (4/9)

| Process Group | Process Name | Process Description |
|---|---|---|
| **Planning** | Plan Cost Management | Establishes policies, procedures, and documentation for planning, managing, expending, and controlling project costs. |
| **Planning** | Estimate Costs | Develops an approximation of the monetary resources needed to complete project activities. |
| **Planning** | Determine Budget | Aggregates the estimated costs of individual activities or work packages in order to establish an authorized cost baseline. |
| **Monitoring & Controlling** | Control Costs | Monitors the status of the project to update the project costs and manages changes to the cost baseline. |

# 9 Knowledge areas

## 4. Cost management knowledge area (4/9)

1. The first planning process (Plan Cost Management): creates the Cost Management Plan which is the framework for all of the other processes.
2. The second planning process creates the estimate of the costs of the individual activities which are
3. then aggregated in the third planning process to determine the project budget, also **known as the cost baseline**
4. The fourth process (Control Costs process) in the Monitoring & Controlling PG, the actual costs of the project are measured as throughout the rest of the project as compared to this cost baseline, and changes are requested if there is a significant enough variance detected from that baseline.

# 9 Knowledge areas

## 5. Quality management knowledge area (5/9)

- Good quality management is probably one of the knowledge areas that gets a rather casual treatment by the Project Management and the team.


- A good quality management program contains the following three processes:

### 1. Quality planning process:

- There will be standards that the product and the process will have to meet. These may be external to the organization, or internal. In addition, there will be project-specific requirements that must be met

# 9 Knowledge areas

**5. Quality management knowledge area (5/9)**

- A good quality management program contains the following three processes:


**2. Quality assurance process:**

- Quality assurance is the prevention of mistakes in the delivery of products and services.
- Quality assurance includes activities that ensure compliance to the plan.

**3. Quality control process:**

- This process involves the actual monitoring of the project using the quality tools, templates and processes.

# 9 Knowledge areas

**5. Quality management knowledge area (5/9)**

- The focus on quality is usually on the product or deliverable that is produced.
- The Quality in this context means the product meets the following criteria:

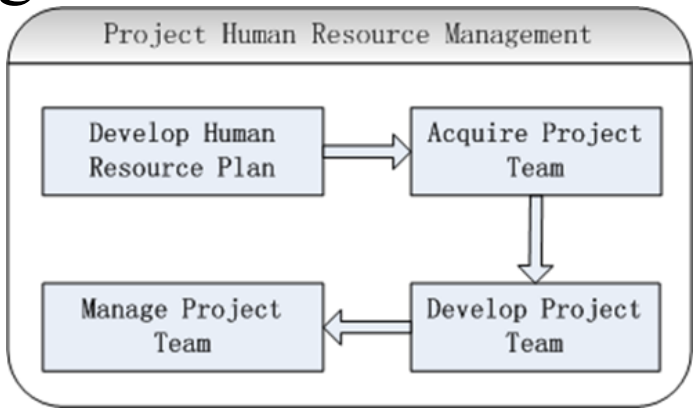
1. It's fit for use
2. It meets requirements
3. It delivers on time, within budget and accordingly to specifications

# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)


- The Project HR Management includes the processes that organize, manage and lead the project team.
- The processes in this knowledge area are:

1. Plan Human Resource Management
2. Acquire Project Team
3. Develop Project Team
4. Manage Project Team



# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)

- The processes in this knowledge area are:

### 1. Plan Human Resource Management

- This is the first process in this knowledge area which comes under the planning process group
  - to Identify and document project roles, responsibilities, required skills, reporting relationships, and creating a staff management plan.
- Also, it contains human resource issues like
  - how performance will be assessed,
  - where the project team will work,
  - how to handle conflicts, and so forth.

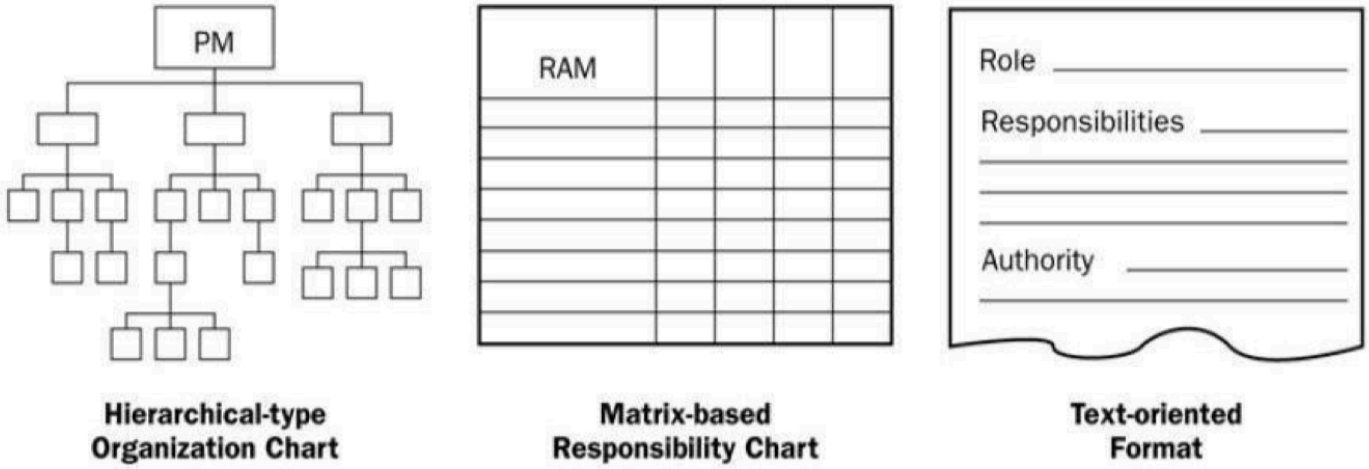
# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)

- The processes in this knowledge area are:

### 1. Plan Human Resource Management

- Organizational Charts and Position Descriptions:
  - I. Hierarchical-type Charts
  - II. Matrix-based Charts
  - III. Text Oriented Formats



# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)

- The processes in this knowledge area are:

### 2. Acquire Project Team

- This is the second process in this knowledge area comes under execution process group to attain & assign human resources to the project.
- These Staff members may come from inside or outside the Organization.
- Project Manager does not always have control over team member's selection. It is usually done by the HR department with the help of project manager and senior managers

# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)

- The processes in this knowledge area are:

### 3. Develop Project Team

- This is the third process in this knowledge area which is coming under Execution process group for creating an open and encouraging environment for your team .

# 9 Knowledge areas

## 6. Human Resource (HR) knowledge area (6/9)

- The processes in this knowledge area are:

### 4. Manage Project Team

- This is the fourth and final process in this knowledge area which comes under Controlling & Monitoring process group for tracking & reporting on the performance of individual team members
- Performance appraisals are prepared and conducted, issues are identified and resolved & feedback is given to the team members.

- understanding the culture and customs of other project participants this will also demonstrate respect, help build trust, and aid in developing an effective project team

# 9 Knowledge areas

## 7. Communication Management knowledge area (7/9)

- Communications Management concerns to
  - the systematic planning,
  - implementation, monitoring,
  - and control of project communications activities

- At the heart of many of the top ten reasons why projects fail is poor communication

- Project Communications Management consists of the following processes:
  1. Identify Stakeholders
  2. Plan Communications
  3. Distribute Information
  4. Manage Stakeholder Expectations
  5. Report Performance

# 9 Knowledge areas

## 8. Risk Management knowledge area (8/9)

- Risk management involves risk management planning, identifying and analyzing risks, developing risk response plans, and controlling risk on an ongoing basis.


- There are six project management processes in the Risk Management Knowledge Area.
  - Five of them are in the Planning Process Group, and the sixth one is in the Monitoring & Controlling Process Group.

# 9 Knowledge areas

## 8. Risk Management knowledge area (8/9)

| PG | Process Name | Process Description |
|---|---|---|
| **Planning** | Plan Risk Management | Defines how to conduct risk management activities on the project. |
| | Identify Risks | Determines what risks may impact the project and documents their characteristics. |
| | Perform Qualitative Risk Analysis | Prioritizes risks for further analysis or action by assessing their probability of occurrence and impact. |
| | Perform Quantitative Risk Analysis | Numerically analyzes the effect of risks on overall project objectives. |
| | Plan Risk Responses | Develops options and actions to enhance opportunities and reduce threats to project objectives |
| **Monitoring & Controlling** | Control Risks | Implements risk response plans, tracks identified risks, monitors residual risks, identifies new risks, and evaluates risk process effectiveness throughout the project. |

# 9 Knowledge areas

## 9. Procurement Management knowledge area (9/9)

- The purpose of project procurement management is to establish and maintain relationships with vendors of goods and services during the project life cycle.

- There are four processes:
  1. Plan Procurement Management
  2. Conduct Procurements
  3. Control Procurements
  4. Close Procurements

# Questions & Answers


THANK
YOU